



AKIMITSU HOGGE—THE TECH

The Dalai Lama

*A day by day account
of his visit to MIT*

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Task force approves of Kendall plan *Faculty demand comprehensive plan before building begins*

By John A. Hawkinson
STAFF REPORTER

A faculty task force has recommended to the Provost that MIT proceed with its east campus (Kendall Square) rezoning proposal, but to consider the land as “an extremely precious resource” and to drive the process with a new comprehensive design plan, rather than commercial interests. The report was discussed at Wednesday’s faculty meeting and released later that day.

Provost Chris A. Kaiser PhD ’87, in his remarks at the meeting, characterized the report as “highly thoughtful and very clearly written.”

The report appears sharply critical of the strategy executed by the MIT Investment Management Company to date, though MITIMCo disagrees. The report’s recommendations are “strategically aligned” with MITIMCo’s existing plans, according to Steven C. Marsh, managing director of real estate.

The report was presented at the sparsely-attended faculty meeting by Samuel M. Allen PhD ’75, the faculty chair and a member of the eight-person faculty committee. The committee was chaired by Thomas A. Kochan, who was the prior faculty chair.

The report enumerates eight findings of the committee, three conclusions, and five design constraints going forward. See sidebar, p. 13.

Need for academic use

The report’s criticism of MITIMCo’s past approach seems stark. From the report:

“This area of land is also the last piece of undeveloped, contiguous campus space lying between

EdX announces partnership with Cengage

Educational services company will provide content to edX students

By Leon Lin
STAFF REPORTER

On Wednesday edX announced a new collaboration with Cengage Learning, a large Connecticut-based provider of educational content and software. The company will both

supply content to edX and work with edX to improve pedagogy.

Cengage publishes *Principles of Biostatistics*, the textbook for one of Harvard’s edX classes, Health in Numbers: Quantitative Methods in Clinical & Public Health Research. Harvard School of Public Health profes-

sor Marcello Pagano, a co-instructor of the class, is also one of the co-authors of the text. The book, like the rest of edX’s content, will be free for students.

“EdX students worldwide will benefit from both Professor Pagano’s in-class lectures and his classic Cengage Learning

textbook in biostatistics [sic],” edX president Anant Agarwal said in a press release.

Over 370,000 people have registered on edX, according to Director of Communications Dan O’Connell. Some people enroll

EdX and Cengage, Page 17

4.0 quake takes New England by surprise

A 4.0-magnitude earthquake shook southern Maine at approximately 7:12 p.m. on Tuesday, resulting in a shock-wave felt all across New England. The quake, which was downgraded from its initial estimated magnitude of 4.6, caused no apparent injuries or property damage. Cambridge residents reported experiencing weak shaking.

At MIT, the dormitory mailing lists were abuzz with expressions of surprise, nonchalance, and momentary confusion, including one thread claiming that “Next House is made of jello.” A few more incredulous students sought confirmation from others that the shaking was indeed the result of an earthquake.

The U.S. Geological Survey reports that the quake was felt most strongly in Maine, Massachusetts, and New Hampshire. Tremors were also felt in other parts of New England, as well as in parts of New Jersey, New York, and even southern Quebec, Canada. East Coast earthquakes — particularly ones in New England — are rarer than their West Coast counterparts but can be felt up to 10 times farther away due to the solidity of the region’s underground rock.

This was the first major quake to be felt in the area since August of last year when a 5.8-magnitude tremor centered in Virginia shook Boston — the East Coast’s most powerful earthquake in 67 years.

—Stephen Suen

Graduate student Allison Tovo-Dwyer passes away

Third-year Department of Chemistry graduate student Allison Tovo-Dwyer passed away last Thursday, after a yearlong battle with cancer. She was 25 years old.

While at MIT, Tovo-Dwyer worked under the supervision of Professor Arup K. Chakraborty. Her research, in collaboration with clinicians, focused on using statistical physics to understand the human immune response to HIV infections and on harnessing this information to help design a potent vaccine.

“Allison was a brilliant woman who would have developed into a great scientist,” Chakraborty said. “Her first publication was accepted into a top journal just a week before she passed away. I wasn’t able to tell her in person due to her hospitalization, but her mom told me the news brought a smile to her face.

My research group and I will miss her very much.”

Tovo-Dwyer hailed from Minnesota and completed her undergraduate degree in chemistry at the University of Chicago. A private memorial service in Chicago will take this Saturday, Oct. 20. Expressions of condolence can be brought to Department of Chemistry Graduate Administrator Jennifer Weisman in Room 2-204 by the end of the day Monday, and will be delivered to the family.

“Allison consistently exhibited kindness and warmth to those around her,” said Christine Ortiz, dean of graduate education in an email to the Department of Chemistry. “Our deepest sympathies are with Allison’s family, friends, and the faculty and staff who knew her.”

Members of the MIT community who feel af-



SOURCE: FACEBOOK

fect by the death are encouraged to contact MIT Mental Health Services at 617-253-2916. The Office of the Dean of Graduate Education can also be reached at 617-253-4860.

—Deborah Chen

IN SHORT

The Head of the Charles starts tomorrow! Support MIT crew in the largest 2-day regatta in the world!

Applications for Institute Committees are now open! Email ua-nomcomm@mit.edu to apply.

Join the MIT-wide “Gangnam Style” flashmob this Sunday at 2 p.m. in Killian Court!

Energy Night is tonight at the MIT Museum, 5-8:30 p.m. Come learn about cutting-edge energy research the Institute is working on!

CONSTRUCTING PUBLIC SPACES

A closer look at the Kerf Pavilion. **ARTS, p. 8**

INTEGRATING EDX INTO MIT

A vision for the classroom of tomorrow. **OPINION, p. 4**

THE FINAL FRONTIER

A visual guide to the universe. **ARTS, p. 8**



REOPENING PANDORA'S BOX

Keith Yost delves into *Borderlands 2*. **ARTS, p. 9**

PEDAL TO THE MEDAL

MIT cycling takes gold in DII. **SPORTS, p. 19**

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French-German disputes could mar European summit

By James Kanter and Stephen Castle
THE NEW YORK TIMES

BRUSSELS — European Union leaders sought Thursday to overcome sharp differences over how to improve supervision of their banks and budgets, at the start of a two-day summit meeting aimed at resolving the eurozone crisis.

But with market pressure on their single currency easing, at least for now, there were already signs that leaders could return to a familiar pattern of bickering, which could delay agreed-to changes, like creating a single regulator for all eurozone banks.

One of the issues overhanging the meeting is a dispute between France and Germany on whether to create such a supervisor by January, as the European Commission has proposed. Paris is pushing to meet that deadline.

French leaders have also pressed for speedy adoption of European legislation to tighten budget discipline across the eurozone, as well as measures to pool at least

some of the eurozone countries' debt.

Germany, by contrast, has emphasized a more cautious approach and is seeking even greater powers of intervention to enable the most solvent countries to enforce budgetary discipline in the eurozone.

The French-German dispute matters. Agreement between governments in Paris and Berlin is seen as vital to any steps toward further integration in Europe and for ensuring the survival of the common currency for the 17 EU countries that use it.

Ahead of the Brussels meeting, Chancellor Angela Merkel of Germany signaled the need for caution and a much grander vision for how to secure the longevity of the euro.

"We are of the opinion — and I speak for the whole German government on this — that we could go a step further by giving Europe real rights of intervention in national budgets," Merkel told lawmakers in Berlin on Thursday.

That earned a tart riposte from

President François Hollande of France, who said that budget intervention "is not on the agenda," as he arrived at the meeting.

"The only decision that will be taken is to set up a banking union by the end of the year and especially the banking supervision," Hollande said.

The creation of a single banking regulator for the euro area was supposed to be a relatively straightforward matter after leaders agreed at a summit meeting in late June to put all lenders in the region under the aegis of the European Central Bank.

The idea was eagerly supported by Ireland, Italy and Spain, because it would be a precursor to letting weak banks in those countries tap Europe's new bailout fund directly, without loading more debt on those countries' governments.

Since June, though, Germany has balked at proposals by the European Commission and France to put all 6,000 lenders in eurozone countries under the supervision of the regulator in a system that would be phased in starting Jan. 1.

Drilling payments cause a dispute in Pennsylvania

By Jon Hurdle
THE NEW YORK TIMES

PHILADELPHIA — Four Pennsylvania townships are challenging a state regulator's decision to withhold their share of proceeds from a statewide levy on drilling by the booming natural gas industry there.

The townships, in a heavily drilled area of southwestern Pennsylvania, were excluded from a list of 35 counties and 1,485 municipalities that will receive a total of \$108.7 million from a new "impact fee" charged to energy companies to help compensate for the effects of gas drilling on local communities.

The payout, the first under a new state law, was announced by Gov. Tom Corbett on Monday, two days before a Pennsylvania Supreme Court hearing on whether the law can pre-empt local control over where gas companies can put installations like drilling pads, compressor stations or wastewater ponds.

The townships are among a group of plaintiffs that won a ruling from a state appeals court in July that the pre-emption of local ordinances by the new law is unconstitutional and unenforceable. The Corbett administration appealed the ruling to the State Supreme Court, which heard oral arguments on the case Wednesday.

The natural gas industry, which has drilled thousands of wells into the Marcellus Shale rock formation since 2008, argues that it should not have to deal with a patchwork of local laws that dictate where it can build drilling rigs and other infrastructure, and that a statewide regulation standard is necessary to maximize output from one of the most productive U.S. shale gas fields.

The townships — Cecil, Robinson, South Fayette and Mount Pleasant — are scheduled to receive a combined \$986,000 that could be used for projects like road repair, sewer construction or inspection of

gas facilities.

But the Pennsylvania Public Utility Commission, which administers the impact fee, said it was withholding payment to the townships until it resolved five "requests for review" that were filed by four local landowners and by Range Resources, a Texas drilling company that has been active in Pennsylvania.

Jennifer Kocher, a commission spokeswoman, said the payments were not being held because of the legal case.

"This has nothing to do with the pending court proceedings but rather the proceedings before the PUC where local residents and producers have requested a review of the municipalities' ordinances," Kocher wrote in an email.

One of the landowners, Tony Pawlosky, said in a filing with the commission that Mount Pleasant Township should not receive impact fee funds of \$511,855 until it brings its zoning ordinance into compliance with the law.

Second Appeals Court rules against Federal Marriage Act

By Timothy Williams
THE NEW YORK TIMES

A federal appeals court in Manhattan ruled Thursday that the federal statute defining marriage as a union between a man and a woman unlawfully discriminates against same-sex married couples by denying them equal federal benefits.

The court, the U.S. Court of Appeals for the Second Circuit, is the second federal appeals court to reject a central portion of the federal law, the Defense of Marriage Act, following the U.S. Court of Appeals for the First Circuit, in Boston, which handed down its ruling in May.

The Supreme Court may take up the issue as soon as the current term.

Two of the three judges on the Manhattan court ruled in favor of Edith Windsor, an 83-year-old woman whose case challenged the

1996 statute, saying it violated the Constitution's equal-protection clause because it recognizes the marriages of heterosexual couples but not those of same-sex couples, even though New York state law makes no such distinction.

Windsor, who filed the lawsuit in November 2010, married her longtime partner, Thea Spyer, in Canada in 2007. The two had been together for 44 years.

Although the marriage was recognized in New York, when Spyer died in 2009, Windsor was not able to claim a deduction for a federal estate tax that is available for the surviving partner of a marriage between heterosexuals. Windsor, who had been the sole beneficiary of Spyer's estate, was forced to pay \$363,053 in estate taxes. When she requested a refund, the Internal Revenue Service rejected her claim, citing federal marriage law.

Judge Dennis Jacobs, who wrote the majority opinion, said

the federal law was "not related to an important government interest," concluding that "homosexuals are not in a position to adequately protect themselves from the discriminatory wishes of the majoritarian public."

The statute, approved by Congress and signed by President Bill Clinton, denies recognition of same-sex marriages by the federal government.

In the intervening years, however, several states, including New York, have approved same-sex marriage, though others have passed laws banning it.

In February 2011, the Obama administration determined that the provision of the law that prevents the federal government from recognizing same-sex marriages was unconstitutional, and President Barack Obama said he had directed the Department of Justice not to defend that aspect of the law in court.

Polls show leads for Obama in Iowa and Wisconsin

President Barack Obama has significant leads over Mitt Romney in Iowa and Wisconsin, two critical battleground states that could serve as a firewall for the president against a late surge by his rival in other places, according to new NBC News/Wall Street Journal/Marist polls released Thursday evening.

In Iowa, Obama leads by eight percentage points in a state he won four years ago by a slightly larger margin, according to the poll. In Wisconsin, the home of Rep. Paul D. Ryan, Romney's running mate, the president has a six-point lead.

Both polls were taken Monday, Tuesday and Wednesday of this week, spanning the period just before and just after the second presidential debate, in which Obama turned in an aggressive performance.

In both polls, Obama leads Romney by 19 percentage points among women, a key constituency that both campaigns are courting with a renewed intensity in the last 19 days of the presidential campaign.

In Iowa, about a third of the state's electorate has already voted, and the poll suggests that Obama has dominated that vote. In Wisconsin, about 15 percent of the voters have already cast their ballots.

The polls were conducted among 1,137 likely voters in Iowa and 1,013 likely voters in Wisconsin. Each poll has a margin of sampling error of plus or minus three percentage points.

—Michael D. Shear, *The New York Times*

Google shares fall on disappointing earnings

SAN FRANCISCO — Google released a disappointing earnings report Thursday that sent its stock price plummeting and reflected the challenges the company faces as it tries to make money in a mobile world.

For Google, mobile has been a mixed blessing. Smartphones and tablets are bringing in new users — and the advertisers that follow them — but it makes less money on mobile ads than on desktop ads. The company reported that the price advertisers paid per click on an ad — referred to as cost per click — decreased 15 percent from the same period last year. This was the fourth consecutive quarter that number has declined, even as the number of paid clicks on ads climbed 33 percent, largely because people see Google ads on their phones on lunch break or in bed, not just when they are in front of a computer.

The challenges of making money in a mobile world were not the only reason that Google's net revenue and earnings per share fell significantly below analysts' expectations. Motorola Mobility, the ailing cellphone maker it recently acquired, is bleeding money.

Still, the report showed that Google was grappling with the mobile revenue riddle. And Google is not alone. The problem is also stumping technology companies like Facebook, Apple, and Microsoft. Just as the Web upended traditional business models for print publications more than a decade ago, now mobile is disrupting Web businesses.

—Claire Cain Miller, *The New York Times*

Twitter blocks Germans' access to neo-Nazis' account

BERLIN — Twitter waded into potentially perilous territory Thursday when it blocked users in Germany from access to the account of a neo-Nazi group that is banned by the government here.

The move was the first time Twitter acted on a policy known as "country-withheld content," announced in January, in which it will block an account at the request of a government. But the company cracked open the gates to a complex new era in which it will increasingly have to referee legal challenges to the deluge of posts that has made the site so popular.

The company said the goal was to balance freedom of expression with compliance with local laws. "Never want to withhold content; good to have tools to do it narrowly & transparently," Alexander Macgillivray, the company's chief lawyer, wrote on Twitter.

A German spokesman for the company confirmed in an email that it was the first time the policy had been used, although Twitter does not as a matter of policy announce government requests to block an account. In a "transparency report" issued this year, the company said it had received six such requests but had not, for reasons it did not specify, acted upon them.

—Nicholas Kulish, *The New York Times*

Iron-dumping experiment in Pacific alarms marine experts

A California businessman chartered a fishing boat in July, loaded it with iron dust and cruised through Pacific waters off western Canada, spewing 100 tons of his cargo into the sea in an ecological experiment that has outraged scientists and government officials.

The entrepreneur, whose foray only came to light this week, even duped the National Oceanic and Atmospheric Administration in the United States, which lent him ocean-monitoring buoys for the project.

Canada's environment ministry says it is investigating the experiment, which was carried out with no government or scientific oversight. A spokesman said the ministry had warned the venture in advance that its plan would violate international treaties.

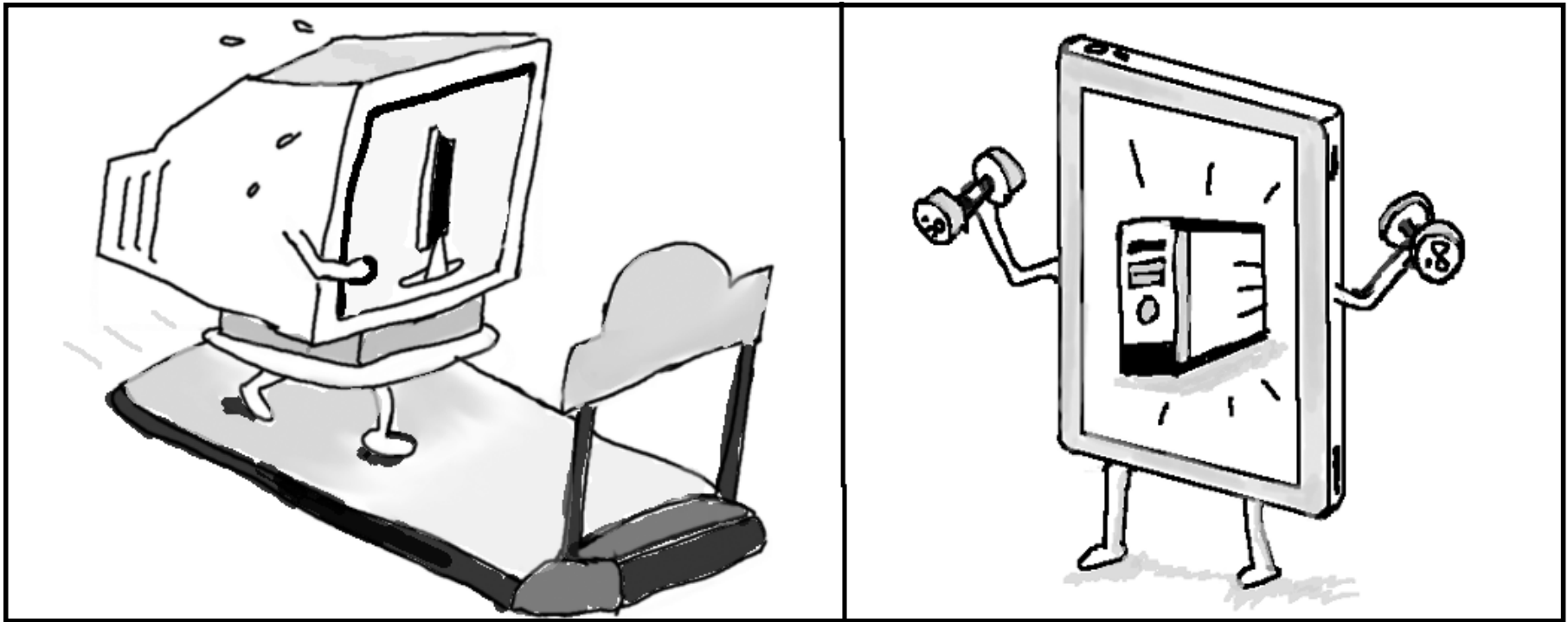
Marine scientists and other experts have assailed the experiment as unscientific, irresponsible, and probably in violation of international agreements intended to prevent tampering with ocean ecosystems under the guise of trying to fight the effects of climate change.

While the environmental impact of the foray could well prove minimal, scientists said, it raises the specter of what they have long feared: rogue field experiments that could eventually put the planet at risk.

—Henry Fountain, *The New York Times*

WORLD&NATION WORLD&NATION WORLD&NATION WORLD&NATION WORLD

FUN



Panel 1: A student with dark hair and a backpack asks a teacher with spiky hair, "YAWN* HEY MAN, I DON'T THINK I CAN MAKE IT TO CAMPUS AFTER THAT PSET. CAN YOU TURN IN MY HOMEWORK WITH YOURS?". The teacher replies, "YEAH, SURE." while holding a paper.

Panel 2: The student asks, "I HEAR YOU'RE TURNING IN THE MATH HOMEWORK?". The teacher replies, "YEAH, SURE." while holding a paper.

Panel 3: The student is pushing a wheelbarrow full of papers, and the teacher is holding a stack of papers. The student says, "OH, ANOTHER PSET! YOU SHOULD QUIT NOW BEFORE YOU END UP USING A WHEELBARROW." The teacher replies, "HEY BUDDIEEEEEHH".

STEVE SULLIVAN OCT. 2012

AND YOU ARE?

I AM JENNY AND I STUDY ELECTRICAL ENGINEERING

YOUR CIRCUITS WON'T IMPRESS ME, ROBOT-GIRL.

RESIST ME IF YOU CAN, CALCULUS-BOY.

Solution, page 16

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Solution, page 16

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4		24x			6
12x				15x	
6		19+		4x	2
10+		1-			5
2				24x	



Students gathered Wednesday evening outside of the Student Center for a candlelight vigil honoring victims of domestic violence.

EKATERINA BOTCHKINA—THE TECH


MIT + TUFTS + WELLESLEY
PRESENT

Milan

GARBA RAAS

Oct 20th, 8 - 11pm | Walker Memorial
142 Memorial Dr., Cambridge

\$5 for MIT, Wellesley, Tufts with ID | \$10 General
TICKET SALES MIT: Lobby 10, Oct 15th - 20th
Tickets also available Online & at Door
web.mit.edu/saas | saas@mit.edu



LEF/
ARCADE

Pavilion project tackles smart design and construction for the future

man or an advanced amateur astronomer, you will enjoy this book. As a person who has loved books and the night sky since I can remember, I wholeheartedly recommended *Universe*. It is a real treat for the curious mind and a feast for the eyes.



By Keith Yost
STAFF WRITER

If you played the original *Borderlands* and liked it enough to do a second playthrough, there is no point in reading this review past the next sentence. *Borderlands 2* is worth its cost at \$60; it has everything the original has, plus a real plot and an almost seamless co-op multiplayer experience.

If you haven't played *Borderlands*, then this review is a bit tricky. *Borderlands 2* is a great game, but it belongs to a very specific genre, one that is very hit-or-miss with most gamers. Knowing whether the game is worth buying depends very much on understanding what sort of experience you're in for.

Technically, the game is listed as a first-person-shooter, a genre which calls to mind *Halo* or *Call of Duty*. This is a very misleading label. *Borderlands 2* is more aptly described as an arsenal management simulator. Almost a third of your time playing will be spent with your nose buried in the inventory screen, comparing the stats on two shotguns to find out which is better. The other two thirds will be mostly spent grinding through hordes of enemies, hoping that their boss drops an even better shotgun. In this way, *Borderlands 2* shares more with dungeon crawler games like *Diablo 3* than it ever could share with the *Halo* series.

Many gamers out there find grinding and looting to be unbearably tedious and will simply not enjoy a game like *Borderlands 2*,

no matter how well done it is. They will be repulsed by the frequent demands to collect 10 MacGuffins or kill 10 moogles, and drop the game after a few hours of play. But if you are the type of person who lives for the ecstasy of loot, *Borderlands 2* is one of the finest examples of its genre ever created.

If you are the type of person who lives for the ecstasy of loot, *Borderlands 2* is one of the finest examples of its genre ever created.

Choosing between options in your inventory of weapons — and to a lesser extent, the perks you get as you level up — is a constant challenge in constrained optimization. *Borderlands 2* offers a dizzying variety of weapons: more than a half million can be randomly generated. Balancing between long-range and short-range capabilities, between burst damage and sustained damage, between ammo hogs and ammo sippers, and between accuracy and firepower — all while continuously upgrading to keep pace with challenges and maintaining access to the game's range of ways to exploit enemy's elemental weaknesses — is a serious challenge. Failing to kit your character with a balanced loadout

often makes the difference in missions, sometimes turning an already grindy game into an extremely grindy, if not impossible game.

The combat is well done. Again, how the combat proceeds depends strongly on how you choose to equip and spec your character, but I found it both appropriately challenging and varied. These are traits that are very hard to find in a loot-and-grind style game, particularly when it comes to managing the game's difficulty. Usually, game developers seem to focus their balancing efforts on a single design-basis threat, making the game near impossible for a single player who skips a significant portion of the sidequests, or a complete walkover for larger, more completionist parties.

To boot, *Borderlands 2* brings to the table a set of qualities that fit well in virtually any genre. The well-voiced dialogue has a combination of dark, witty, juvenile, and self-referential humor. The game's cel-shaded graphical style is a welcome break from the usual grey and brown shooter style, while having the added benefit of reducing the jarring effect of texture pop-in. The plot is...well, nothing that would win a storytelling award, but certainly better than the first game which had virtually no plot. Finally, the game handles multiplayer co-op with very few hiccups, making it easy to join in with friends online.

However, there are still some complaints to lodge. In multiplayer games, loot should be randomly distributed among the players



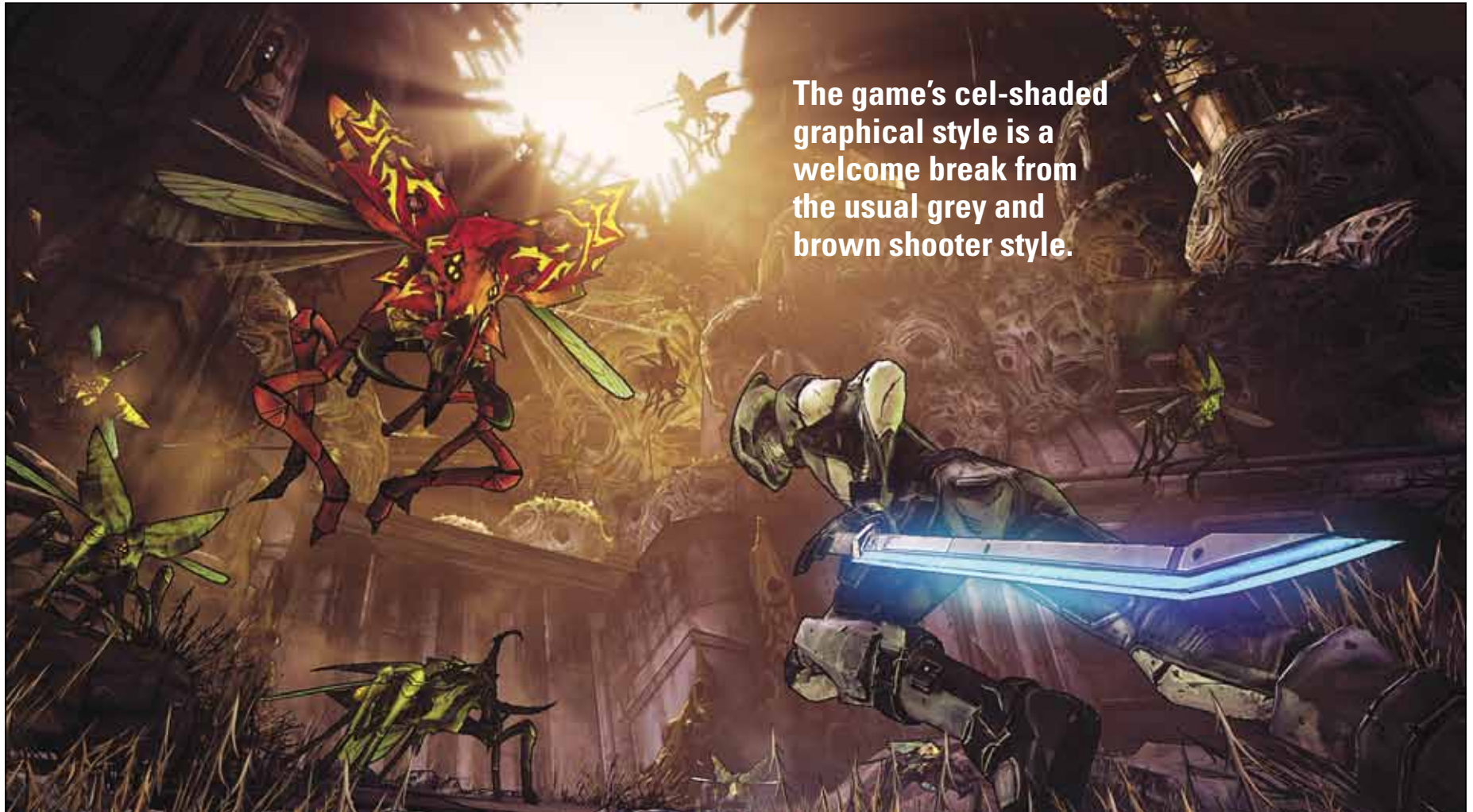
Borderlands 2

**Developed by Gearbox
Software**

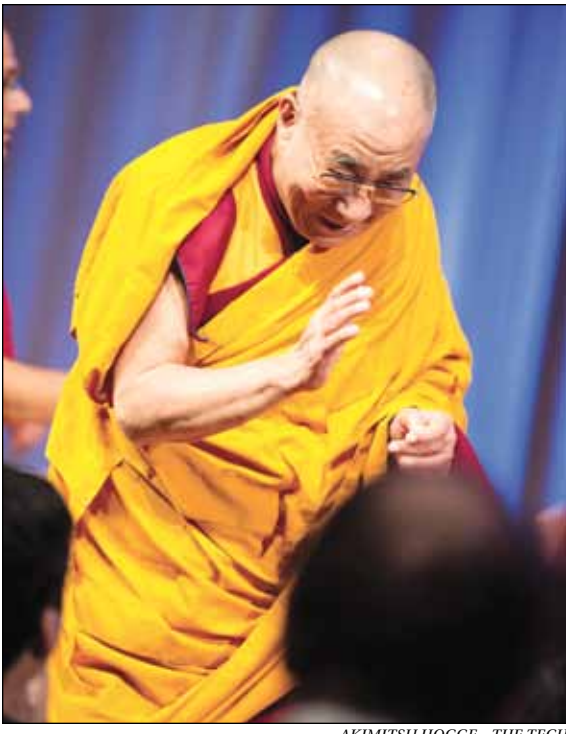
**Published by 2K Games
for Microsoft Windows,
PlayStation 3, and Xbox 360**

instead of going to whoever grabs it first as it does in *Borderlands 2*. Vehicle handling could stand improvement, as could some of the game's menus. And there is no good reason for why the game only allows one quest to be active on your heads-up-display at a time. None of these problems are deal breakers (except the loot distribution system in regards to playing the game with strangers).

For the most part, the question of whether or not you will like *Borderlands 2* depends on whether looting and grinding is something that thrills or bores you. For enthusiasts of the genre the game is one of the rare few that deserves its full price tag — at the very least, pick it up in a few months when the price has fallen to around \$40. For those turned off by grinding, even if first person shooters are your bag, *Borderlands 2* is a game only worth considering in the \$10 range, and even then maybe not.



IMAGES COURTESY OF GEARBOX SOFTWARE



The Dalai Lama greets the crowd during his lecture “Stages of Meditation: Buddhism for the 21st Century” on Tuesday.



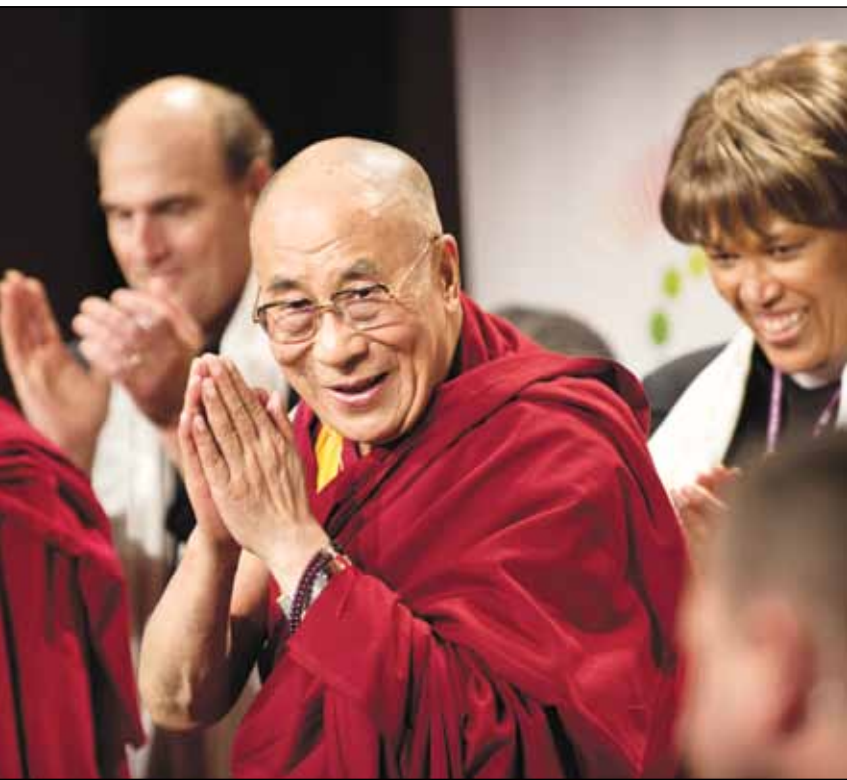
Adrian Anantawan, a renowned violinist born without a right hand, opens the event on Monday with a violin solo.



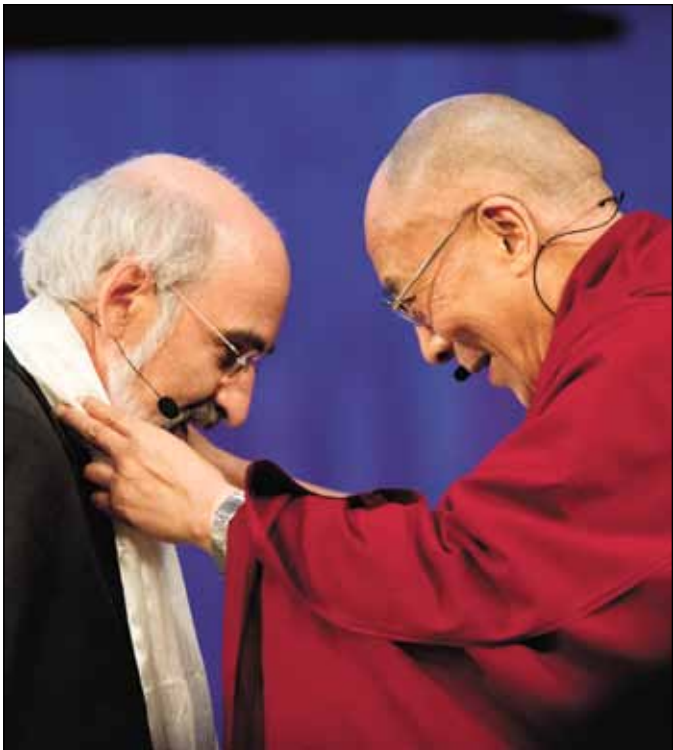
In his talk on Sunday, the Dalai Lama emphasized that people can practice compassion and live a happy life, with or without religion.



The Dalai Lama talked about the need to care for our planet in the morning panel on Monday.



The Dalai Lama bows with others.



John D. Sterman, professor at Sloan School of Management, is thanked by the Dalai Lama and donned with a sash.

The Dalai Lama

This past Sunday, the Dalai Lama visited the Institute for three days of panel discussions with members of the MIT community. Here's a look at what happened during his stay.

VIDEO: GLOBAL SYSTEMS 2.0 — THE DALAI LAMA AND MIT PROFESSORS SPEAK ON ETHICS, ENVIRONMENT, AND THE ECONOMY

SUNDAY

The Dalai Lama arrives

By Austin Hess
ASSOCIATE NEWS EDITOR

Tenzin Gyasto, the Dalai Lama and foremost figure in Tibetan Buddhism, recently concluded a visit to MIT, home to the Dalai Lama Center for Ethics and Transformative Values. The Center organized several events this week with the Dalai Lama and other prominent spiritual and academic figures.

The first event was held on Sunday, Oct. 14 at the Marriott Copley Place Hotel in Boston in a ballroom filled with nearly two thousand people. Following a performance by James Taylor and cellist Owen Young, the Dalai Lama spoke with Catholic monks Thomas Keating and David Steindl-Rast in a discussion entitled “Beyond Religion: Ethics, Values, and Wellbeing.”

The Dalai Lama was generally jovial and made several jokes before taking his seat between the other panelists and donning a visor to protect his eyes from the bright stage lights. He spoke mostly in English with occasional help from a translator. His Holiness clarified the purpose of the talk, saying “[Ethics beyond religion] doesn’t mean there’s something better than religion, but values can use something separate from religious belief.” His

main focus was the importance of compassion: “I want to show people compassion. If you have religious faith, great. Practice it. If not, still practice these values, and you will have happier days and months.”

The Dalai Lama pointed out that to him, secularism does not imply anything negative about religion, but rather encourages respect for all religion. Since, he noted, even among professing believers, many people don’t care very much about religion, it is necessary to educate people using common human experience or science.

His recommendation was that to bring change, “each person should think they can help make a happier world and start from the individual.”

Reverend Liz Walker moderated further discussion among the speakers following the Dalai Lama’s comments.

David Stendl-Rast responded in agreement with the Dalai Lama’s comments, noting, “Faith is basic human trust and is used differently in different religions.”

Thomas Keating echoed the message of compassion, calling it “something desperately needed today.”

“God draws people to himself,” Keating said, “and religion is only one way.”

MONDAY

Sustainability, ethics and global systems

By Kath Xu
STAFF REPORTER

On Monday, Oct. 15, the Dalai Lama participated in a whole-day forum, in which he shared the stage with a diverse group of experts. The event, titled “Global Systems 2.0,” focused on global issues, such as world hunger, climate change, and global health. The day consisted of two panels: one in the morning titled “Ethics, Economics, and Environment,” and one in the afternoon titled “Peace, Governance, and Diminishing Resources.”

Each panelist had 10 minutes to present his or her area of specialty before listening to the Dalai Lama’s response. Panelists included James Orbinski (current international president of Doctors without Borders and Nobel Peace Prize recipient), several MIT professors, and Jonathan Foley (director of the Institute on the Environment at the University of Minnesota).

Kerry Emanuel, a professor of atmospheric science at MIT, started the day with a presentation on the environment in the morning panel, “Confronting Global Climate Change.” Rebecca Henderson, formerly a Sloan School professor at MIT, followed by talking about the economics of reducing fossil fuels, while Penny Chisholm, a professor of environmental studies at MIT, presented on ways to decrease the amount of carbon dioxide in the atmosphere through geoeengineering.

“We have the responsibility to take care of our own planet. This is our home,” said

the Dalai Lama in response to Professor Emanuel’s presentation. “If something happens to it, there isn’t a planet we can move to.”

Several times during the event, the speakers incorporated humor into their presentations, drawing the Dalai Lama and the crowd into laughter. Each speaker in the afternoon jokingly self-identified themselves in two words based on their research. Jon Foley called himself “Doctor Happy,” James Orbinski “Doctor Reality,” Zeynep Ton “Doctor Jobs,” and John Sterman “Doctor Doom.”

Foley began the afternoon panel presentations with facts surrounding the global food supply.

“If you want to solve climate change, you have to think about food first,” said Foley. “We have to solve all of these problems at the same time.”

In his presentation, James Orbinski emphasized the widening gap between the privileged and the poor, pointing to the water insecurity, pollution, infectious diseases, and war that third-world countries often face.

Zeynep Ton, an assistant professor at Sloan, studied the plight of retail workers in the U.S. and how their job dissatisfaction negatively affected not only their own happiness, but also the companies’ profits.

“We are our identified by our work,” said Ton. “More than 900 million people in this world have bad jobs.” She highlighted the significance of creating fulfilling jobs, as

TUESDAY

Buddhism and meditation

By Janelle Mansfield
ASSOCIATE NEWS EDITOR

On Tuesday, the Dalai Lama spoke about Buddhism in the modern world. In his talk titled “Stages of Meditation: Buddhism for the 21st Century,” His Holiness explained the basic principles of Buddhism and called for respect for all beliefs.

The Dalai Lama gave the talk in celebration of the 10th anniversary of MIT’s Prajnopaya chapter. Prajnopaya, which is Sanskrit for wisdom and compassion, is an organization that encourages the study of Buddhism and humanitarian efforts. The lecture was based on the Buddhist text “Stages of Meditation,” written by Indian yogi scholar Acharya Kamalashila in the eighth century.

After introductory performances by Boston vocal group Blue Heron and violinist Adrian Anantawan, the Dalai Lama was welcomed to the very crowded Kresge Auditorium by MIT’s Buddhist chaplain, the Venerable Tenzin Priyadarshi.

Accompanied by several monks, His Holiness took the stage. The stage at Kresge featured a raised platform, furnished with a coffee table and a couch, several cushions for the monks to sit on, and a tapestry hanging in the background. He amused the crowd by accepting and putting on an MIT baseball hat, which he later compared to a visor he had brought with him.

He began by speaking about the importance of religious tolerance, saying that “religious faith must come from within ... it is up to the individual” to decide and sharing stories of others attempting to convert him to their religion. “You must have faith in your own beliefs and respect for others’ [beliefs],” he said.

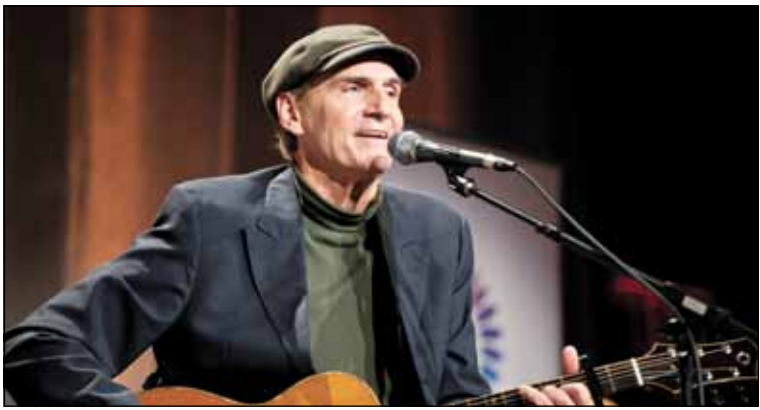
The Dalai Lama also gave a brief overview of the principles of Buddhism. He explained that Buddhists believe suffering is caused by a misconception of reality that leads to unrealistic expectations. According to the teachings of Buddhism, people focus too much on external conditions and not the experiences themselves. The antidote to suffering is to “cultivate wisdom” and attempt to “understand the ultimate nature of reality,” said the Dalai Lama.

Another key idea in Buddhism the Dalai Lama mentioned is the idea of opposing forces that cannot coexist — if we wish to decrease one force, we can do so by increasing the other. He gave examples of ignorance and wisdom; if we gain wisdom, we will stop being ignorant. The Dalai Lama also applied this idea to the forces of anger and kindness.

The Dalai Lama peppered his talk with anecdotes of his travels and insights he had gained from talking to people around the world. He was an incredibly engaging speaker, keeping the audience entertained with his great enthusiasm and good nature.



The Dalai Lama gave a talk hosted by The Dalai Lama Center for Ethics and Transformative Values titled “Beyond Religion: Ethics, Values, and Wellbeing” at the Boston Marriott Copley Place last Sunday.



James Taylor, five-time Grammy Award-winning musician, made a special appearance last Sunday at the Dalai Lama’s talk at the Boston Marriott Copley Place.

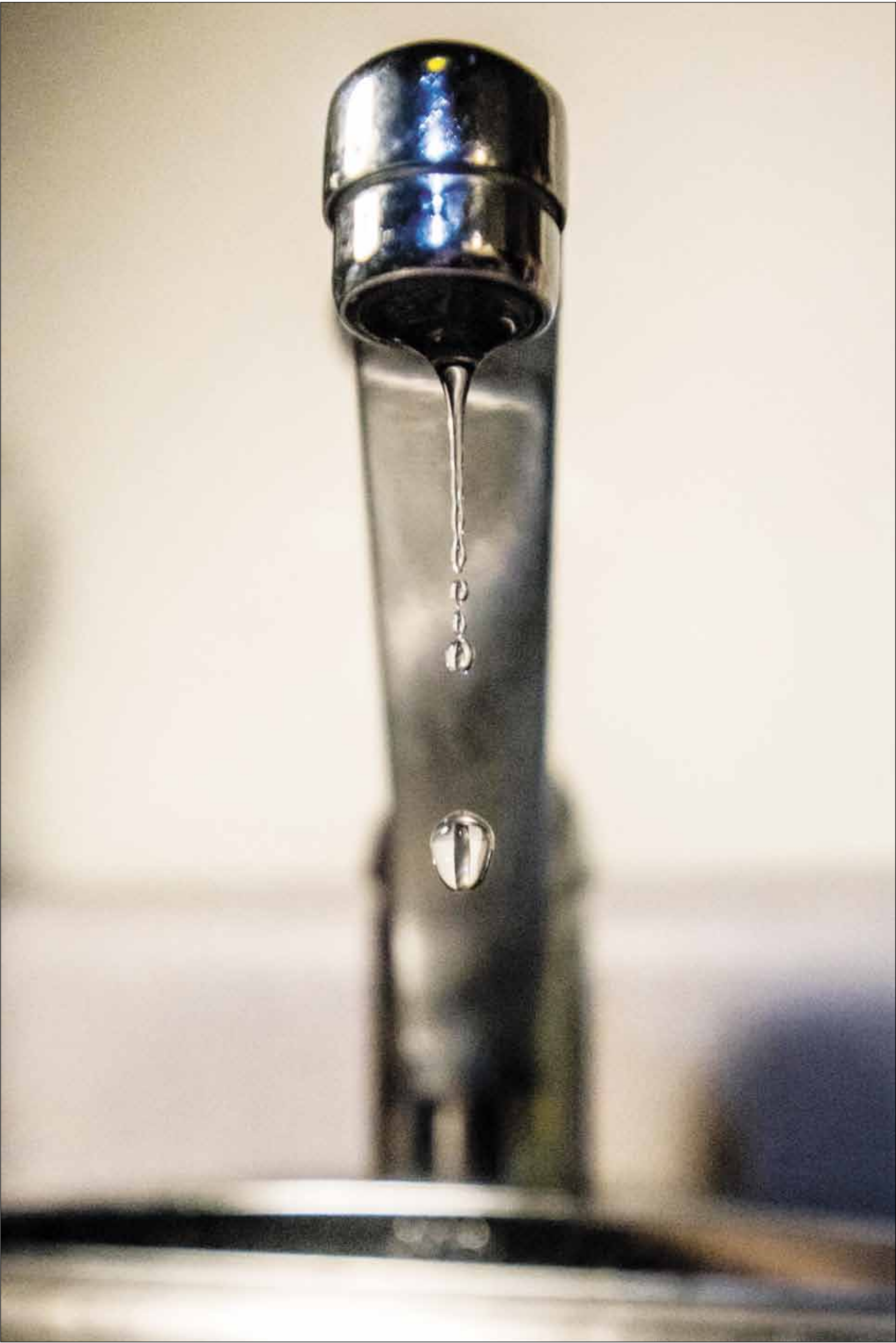


Audience members flocked to vendors selling Buddhist items at the Boston Marriott Copley Place after the talk concluded last Sunday afternoon.



The Dalai Lama speaks with a panel including Father Thomas Keating and Brother David Steindl-Rast to a large crowd on Sunday.

Institute Double Take



By James Sun

A water drop, dripping from a dorm faucet, appears frozen in space by using a fast shutter speed.

Aperture:
f/4.5

Exposure Time:
1/4000 sec.

Sensitivity:
ISO 12,800

35mm Equivalent Focal Length:
35 mm

Old plan ‘fell short’ MIT faculty say

Kendall plan, from Page 1

the Charles River, Main Street and Ames Street, with ready access to the MBTA Red Line, representing an extremely precious resource...

The planning and development process affecting this part of campus has become intertwined with MIT’s commercial real estate investment goals. ...

[F]inancial return should not be the principal criterion of value creation and success for this area of campus. ...

The current rezoning plan (as outlined by MITIMCo) for development of the Kendall Square area falls short of the aspirations described above.”

But “I didn’t read it that way,” says Marsh. Marsh sees a lot of alignment between the task force’s recommendations and what MITIMCo has been working on. He cites the importance of an east campus gateway that would mirror the prominence of 77 Massachusetts Avenue, as well as the desire for ground-floor retail and amenities in new buildings. Both featured prominently in MITIMCo’s original proposal from April, 2011, and are key points in the task force report.

Kochan thinks that MITIMCo has been doing the job it was “instructed to do,” and said that MITIMCo staff are professionals who are well-equipped to execute the revised vision articulated by the task force.

Landmark confusion

There has been substantial confusion over the precise landmark status of buildings E38, E39, and E48: the MIT Press building, Rebecca’s Café, and the Kendall clock tower building.

The executive director of the city’s historical commission has expressed a desire to see those buildings preserved in their current form. But for them to become landmarks, the six-member commission would first have to vote to recommend them as landmarks, and then the nine-member City Council would have to vote to accept that recommendation.

The task force report says that the build-

ings have been designated as landmarks that must be preserved. That is wrong.

In fact, the negotiation on the landmark status of those buildings seems likely. Kochan said, “We’re recommending that MIT and the representatives of the city sit down and look at a range of options for preserving and honoring the historical significance of Kendall Square. There are a variety of ways to do that that are not just limited to preserving the three buildings in question.”

“I think we could be *really* creative,” Kochan said. MIT could build “something that honors the history in a very interactive visual kind of way, with some of the physical artifacts of the old buildings. But do it in an MIT style, with educational materials, videos, interactive simulations of what Kendall Square used to look like and looks like today. I think that would be a way to achieve the objectives of historical preservation, but also demonstrate that it’s an area on the move, has been on the move, and will be an important part of the future.”

Of course, MIT has been looking at such options for some time. Discussions with the historical commission began in the summer of 2011, and Marsh has previously told the planning board he is trying to “make it work.”

The text of the report seems to have caused some confusion. When Kaiser introduced the task force results at the faculty meeting, both he and Allen indicated the buildings were landmarks. But, according to Nathaniel W. Nickerson, director of communications at MIT, both the provost and the task force members understood on Wednesday that the buildings had not been designated as landmarks.

A question of timing

At the faculty meeting, Professor Richard de Neufville ’60 (ESD, Civil Engineering) praised the report, but expressed concerns about the timing and sequencing of events.

de Neufville asked why MIT would re-submit its zoning proposal in advance of preparing a comprehensive plan. He sug-

gested there was no particular hurry to submit the zoning petition, and that the planning board would look more favorably upon an upzoning petition that includes features of interest to the city, such as graduate student housing.

Provost Kaiser replied that there was a window of opportunity which might not exist in future.

“With due respect, I would challenge that,” de Neufville said. He suggested there was no particular reason why a zoning petition could not be filed later, and asked for specifics. Kaiser offered to speak with him offline, but did not reply with substance.

Kochan, the committee chair, told *The Tech* that there is a lot of energy on the city’s side that supports acting now. The city manager, the planning board, and city staff have all been working to respond to MIT and have given feedback, he said. “They are interested in having us come back as soon as possible,” he said.

Additionally, the city’s Kendall-to-Central planing process (K2C2) is winding down, and the outside consultants who are assisting with the process, Goody, Clancy & Associates, are only available for a limited time.

But to a certain extent, the city is expecting MIT’s zoning petition because it has been told to expect it. It could certainly choose to proceed with the non-MIT-specific portions of the Kendall zoning in the interim. Zoning in Kendall Square is divided up into large units by property owner, and the city and the planning board had chosen to tackle MIT’s zoning first, because its zoning unit had the most potential for development, and it had previously filed a zoning petition. But there is nothing about the process that requires MIT’s unit to be handled first.

It is unclear how soon MIT might refile its zoning petition. Kochan said “I think it’ll be ready to be filed soon,” but Marsh seemed less certain. For Marsh, refiling the petition appeared to depend on the negotiations about the landmark status of the three buildings, but it is unclear when those discussions will reach a conclusion.

High points of the 2030 report

Findings

1. The affected real estate represents “an extremely precious resource.”
2. Prior planning and development here have been “intertwined with MIT’s commercial real estate investment goals,” and have typically taken place a significant distance from main campus.
3. Financial return should not be the “principal criterion” for this area.
4. The previous zoning plan “falls short of the aspirations” in points 1–3.
5. MIT needs to carefully consider additional housing for the community, especially graduate students. Such housing could be on-campus or off-campus.
6. Traffic impact needs to be considered.
7. The Cambridge Historical Commission has expressed an interest in designating E38, E39, and E48 as landmarks.
8. The City Manager and the Planning Board have asked to see MIT’s petition soon.

Conclusions

1. A comprehensive urban design plan should be completed, after the petition is approved but before anything is built.
2. The Task Force should participate directly in the planning process.
3. The plan should be guided by several design principles, listed below:

Design Principles

1. There must be an east gateway to MIT worthy of MIT and its aspirations, missions, and excellence.
2. The new buildings must “convey a campus feeling”; their ground floors should be reserved for inviting academic, student life, or retail uses and should not be gated or private.
3. Commercial space in Kendall Square should extend the campus, not the other way around.
4. Commercial development should generate an appropriate financial return, but perhaps not the same return as properties further from campus.
5. Commercial development should only happen in the context of the comprehensive design plan.

— John A. Hawkinson



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Woman reports sexual assault at MIT

A woman reported to police yesterday that she had been sexually assaulted on the MIT campus on Oct. 14. The call was reported to other police before reaching campus police, but the incident is currently under investigation by the MIT Police.

MIT offers a number of resources on sexual assault education. The Violence Prevention and Response team, along with a variety of student groups, runs a number of workshops and educational programs throughout the school year designed to teach assault prevention and awareness, and how to support a friend who has survived sexual assault. More information on these sessions and how to get involved can be found online at http://medweb.mit.edu/wellness/programs/violence_prevention.html.

Campus police recommends programming your cell phone with the MIT Police emergency number (617-253-1212), and encourages students to call it if they ever feel they are in an uncomfortable situation. Take note of blue lights on campus, and dial 100 from any campus telephone to reach the police. Most of all, stay aware of your surroundings!

—Jessica J. Pourian



ELIJAH MENA—THE TECH

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Aaron Swartz asks court to suppress data from MIT

Does MIT follow policy (requiring a court order) when releasing network history information?

By John A. Hawkinson
STAFF REPORTER

MIT released details and logs of Aaron Swartz’s use of the MIT network to law enforcement without a warrant or subpoena, according to court documents filed on Friday, Oct. 5.

The release violates MIT’s written policy on network information disclosure, Swartz’s filings say, but MIT Information Services & Technology disagrees. Swartz’s motion asserts MIT’s policy permits disclosure “only” in the face of a “court order or valid subpoena,” but the policy does not contain the word “only.”

The details of MIT’s disclosure of this information are important to students because the same policies govern the release of information for other kinds of activities, such as illegal downloading and filesharing.

MIT has defended its actions as necessary to “protect its network,” but has refused to explain that comment further.

Background

Swartz is accused of downloading millions of documents from JSTOR, an online journal archive, by hiding a computer in a network closet in the Building 16 basement. He has pleaded not guilty to 13 counts of federal law violations, and a jury trial is scheduled for Feb. 4, 2013.

On Jan. 4, 2011, the day after MIT was notified about Swartz’s third episode of JSTOR downloads, “the Secret Service assumed control of the investigation,” according to the filings.

MIT provided the Secret Service with “network flow data” and DHCP log information for Swartz from the prior 18 days, and packet capture of traffic to and from Swartz’s hidden laptop.

Network flow data is collected by the MIT network in an automated fashion, and consists of timestamped records summarizing source and destination Internet addresses, timestamps, number

of bytes and packets, and network protocol. That information is sufficient to identify the kind of network use associated with a computer on the network. The information can translate to a list of the websites a person visits, whether they are engaging in peer-to-peer downloading through means such as BitTorrent, whether a computer is running a webserver, and similar activities.

DHCP log data, on the other hand, identifies the hardware address of a particular computer, and records the Internet IP address that the computer is automatically assigned by the network.

Packet capture data is actual real copies of the information sent over the network; it is not summarized or aggregated like network flow data, but it is not collected automatically and requires a lot of space to store. It’s not practical for MIT to collect packet capture data for more than a handful of computers on the network; but network flow data is much smaller and more manageable and can be collected for all machines on the network.

Because this data is so sensitive, MIT does not disclose it lightly. IS&T has a written policy that covers DHCP data, but does not explicitly mention network flow data or packet capture data.

The filing that provided this information was a 21-page motion to suppress MIT’s disclosures. It was the first of five motions to suppress evidence filed on Oct. 5. But it is not typical for courts to suppress DHCP logs and similar network information.

Martin G. Weinberg, Swartz’s attorney, wrote in an email that while some of the motions raise traditional Fourth Amendment challenges, “certain of the motions raise novel” Fourth Amendment challenges with respect to “new technologies.”

MIT’s explanation

When asked about MIT’s disclosure of network data without a subpoena, Marilyn T. Smith, head of IS&T told *The Tech* in a prepared

statement last week that “MIT acted responsibly in unique circumstances to protect its network and ensure the ability of members of the MIT community to access important scientific journals.”

Smith was unable to explain how MIT’s decision not to wait for a subpoena before disclosing the information “protected” the MIT network, or affected “ability to access” scientific journals. Smith repeatedly declined to add more information, saying that MIT does not comment on matters related to active criminal proceedings.

Smith did say that MIT “has not changed its historical practice around the disclosure of personal information to law enforcement.”

But how might MIT’s actions here differ if the party was a student engaged in illegal file sharing? If MIT’s choice to disclose Swartz’s network usage without a warrant is consistent with the policy, then disclosure of a student’s filesharing activities would seem to be as well.

Did Swartz break in?

The indictments against Swartz charge him with “break[ing] into a restricted-access computer wiring closet” in Building 16.

But in Swartz’s second motion to suppress evidence filed on Oct. 5, Swartz claimed not to be a trespasser, and claimed not to have forfeited his expectation of privacy in his laptop because he did not “abandon” the laptop in a legal sense.

Swartz’s motion describes the network closet as within a network of hallways which are used by people to travel between MIT buildings.

“There were no signs ordering people to keep out, ... and the door to the data room opened readily with a ‘quick jerk,’” the motion said.

Swartz also argues that to find abandonment, “there must be ‘clear and unequivocal evidence’ that he intended to abandon the laptop. The fact that law enforcement expected him to return — and that they set up video surveillance

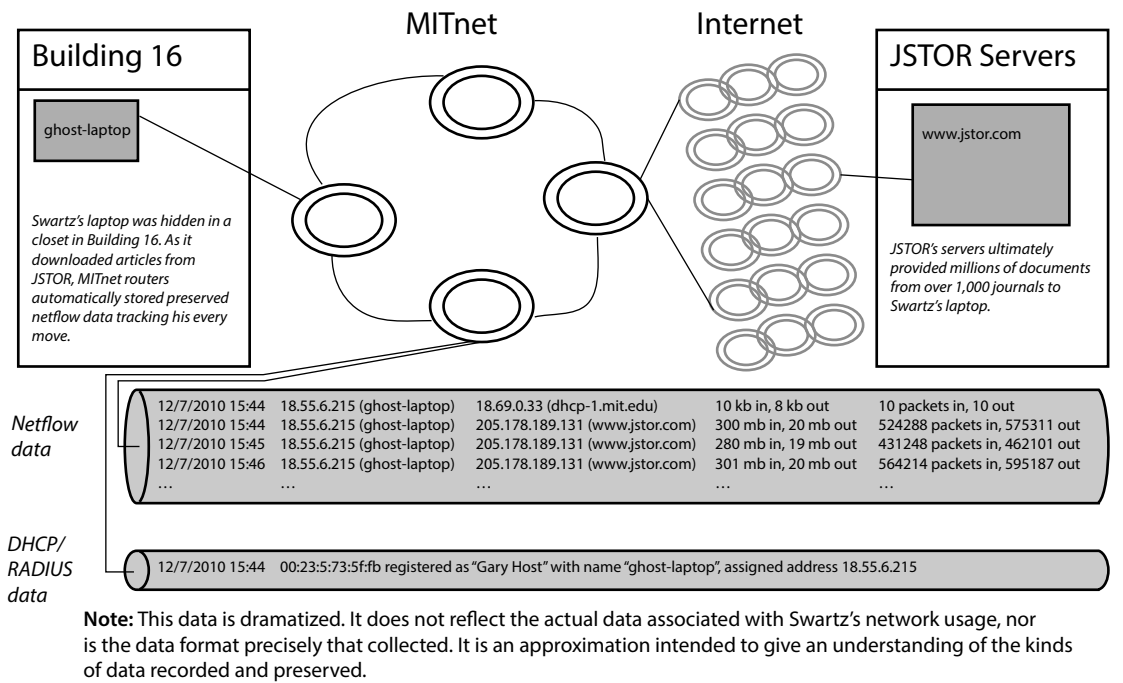
in anticipation of that — means that he did not abandon the laptop, the defense claims.

History

Swartz’s saga with MIT and JSTOR began in September 2010. He began mass downloading JSTOR documents on or around Sept. 24, and JSTOR first blocked his access on Sept. 26. He resumed his downloading on Oct. 2 and was blocked again on Oct. 9. Another episode occurred on Dec. 26, and again on Jan. 4. He was spotted and apprehended on Jan. 6.

Swartz was originally indicted on four counts on July 11, 2011. The indictment was superceded on Sept. 12, 2012, and the revised indictment is for thirteen counts. He appeared in court and pleaded not guilty on Sept. 24, 2012.

His trial is currently set for Feb. 4, 2013 in United States Federal Court before Judge Nathaniel M. Gorton at the Moakley Courthouse on the Boston waterfront.



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Solution to Sudoku

from page 5

7	6	3	8	1	2	4	9	5
8	2	9	5	4	7	3	6	1
1	4	5	6	9	3	2	8	7
3	1	6	2	5	4	9	7	8
2	5	8	1	7	9	6	3	4
9	7	4	3	6	8	1	5	2
6	9	1	7	2	5	8	4	3
4	3	7	9	8	1	5	2	6
5	8	2	4	3	6	7	1	9

Solution to Techdoku

from page 5

5	6	4	2	3	1
4	5	3	1	2	6
1	2	6	4	5	3
6	1	5	3	4	2
3	4	2	6	1	5
2	3	1	5	6	4

Solution to Crossword

from page 6

A	P	P	S	G	R	A	Z	E	X	M	E	N
R	H	E	A	M	A	R	I	E	P	O	L	E
E	A	R	T	H	A	N	G	E	L	R	O	S
A	I	M	E	E	L	O	G	E	I	D	E	R
S	R	A	N	C	O	F	I	Z	Z			
			F	I	R	E	W	H	E	N	R	E
S	P	R	A	I	N	A	L	D	A	C	U	E
L	I	O	N	T	A	R	D	Y	S	C	O	W
E	S	S	K	I	D	D	C	A	R	E	S	S
W	A	T	E	R	M	O	C	C	A	S	I	N
			L	O	O	P	M	R	T	T	A	J
N	O	N	P	C	T	E	A		A	B	U	S
A	R	I	A		A	I	R	J	O	R	D	A
S	A	P	S		D	O	N	O	R	R	T	E
A	L	S	O		S	N	O	R	E		M	E

EdX and Cengage collaborate

Over 370,000 registered on edX now have access to additional Cengage content


EdX and Cengage, from Page 1

in more than one course, bringing course enrollments up to over 500,000. “With the expansion of our course offerings in Spring 2013 to between 20 and 30 courses, enrollments will continue their rapid climb and we expect to hit the million course enrollment mark early in 2013,” O’Connell said in an email to *The Tech*.

EdX declined to provide a breakdown of enrollments by course.

The eight courses on edX represent just a fraction of the massive open online classes (MOOCs) that have been cropping up in the past couple of years, including 18 from Udacity and 198 from Coursera, two platforms that grew out of projects at Stanford. Both of HarvardX’s classes started on Monday, the same day the University of Texas system announced that it was joining edX. In addition, a new course from the University of California, Berkeley, which joined in July, has appeared on the edX website. The course is called Foundations of Computer Graphics, to begin on Nov. 5, the third class from BerkeleyX, and the sixth class in computer science or electrical engineering.

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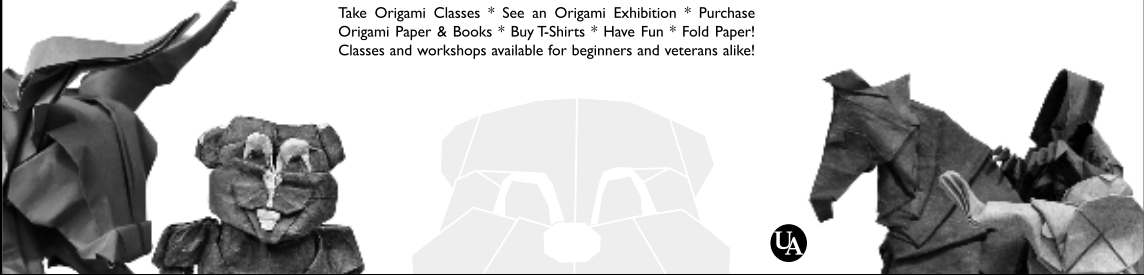
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Richard Holton, MIT professor of
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Reception to follow.



Panelists will respond to questions about open access and its importance for scholarship and research at MIT and beyond.

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Director of MIT Libraries.

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This game should be a shootout. Both teams allow over 30 points on average and the Bills' rush defense has been awful this season, allowing almost 200 yards a game. Chris Johnson has contin-

In a battle of rookie QBs, the Colts definitely have the advantage. Andrew Luck has shown potential and poise early in his NFL career. Brandon Weeden has also improved since his first few starts, and he earned his first NFL win last week by shredding the Bengals defense. The Colts have played well against the pass this season, and the Browns do not have any running game to speak of. Trent Richardson has been disappointing, and he will really need to step up if the Browns want a chance at a win. The Colts should be able to move the ball through the air, as the Browns al-

Even in their loss last week, Oakland did a good job stopping Atlanta's running attack. They held the Falcons to three yards per carry, and they hope to do the same this week against the Jaguars. If the Raiders can contain Maurice Jones-Drew, the Jaguars

The Pittsburgh Steelers are banged up. Troy Polamalu, Lamarr Woodley and Rashard Mendenhall head an injury report that is one of the largest in the league. If that weren't bad enough, they also lost RB Isaac Redman in their loss to the Titans. The once great defense is just a shell of its former self, but they may not need their full strength against Cincinnati this week. The Bengals come off an embarrassing loss to Cleveland. Although Andy Dalton played well, he made too many mistakes, throwing three interceptions. He needs to cut down on the

Prediction: 31-20 Bears

news@tech.mit.edu

Cycling takes on 45 degree banking, wins Nationals

Seven MIT team members earned the Division II title at Track Nationals in Texas

By Christina Birch
TEAM REPRESENTATIVE

Seven MIT Cycling members descended on the 45-degree banked 250-meter wooden velodrome in Frisco, TX, for the USA Cycling Collegiate Track National Championships on September 20 through 22. Their mission? Gold medals, Stars and Bars jerseys, and the hotly contested DII National Championship title.

Track cycling is one of the most dynamic disciplines of cycling with events that challenge athletes not only to overpower their opponents, but also to outwit them. Cyclists ride counter-clockwise on fixed gear bicycles without brakes on a 250m or 333m oval “track” or “velodrome” with banking up to 55 degrees.

“Apart from racing, just riding on the track is flat-out fun!” says Spencer Daniel Schaber G. “The 45 degree banking is daunting at first because you have to ride 17 mph just to stay on it, but after getting the hang of it, it’s like a roller coaster.”

Katherine A. Wymbs ‘14 was pure enthusiasm at the event: “Nothing quite compares to diving into the sprinter’s lane from high on the banking like a lightning bolt into the Flying 200 [meter time trial] and maintaining speed around the [final] turns!”

The Collegiate Track National Championships consists of seven events across three days: some events are performed solo (long and short individual time trials called

“pursuits,” and matched sprints), some raced as a team (team pursuits and the co-ed sprint), and some against all other athletes simultaneously (points race and scratch race).

With a record turnout of 120 riders, the MIT team had to rely on each other to ensure teammates were ready for their races. Schaber says he “repeatedly swapped aerodynamic wheels and handlebars, changing chain rings and cogs to get the optimal gear ratio for each event.”

Notably, Christina Marie Birch G clocked 4:03 for a 3-kilometer individual pursuit, earning a fourth place medal. Michael Lane Garrett G earned 7th in the Flying 200-meter time trial by completing his sprint in under 12 seconds. Zachary A. LaBry G and Garrett placed 8th and 10th respectively in the men’s 4-kilometer individual pursuit, only a second apart with times of 4:58 and 4:59.

The women’s team, comprised of Birch and first-year track cyclists Wymbs and Edrie Buenaventura Ortega G, finished the 3-kilometer team pursuit first among teams fielding only 3 out of 4 possible riders. The men’s team included Garrett, LaBry, Schaber, and Zachary Seth Hartwig G, and finished 10th in the men’s 4-kilometer version of the event.

Each day the team arrived at the track before sunrise, warmed up under stadium lights, raced until 3 p.m. in increasingly hot conditions, only occasionally with a 1-2



BILL GARRETT

The victors sport their Stars and Bars National Championship jerseys and gold medals while leaning against the 44.6-degree velodrome racing surface.

hour break for lunch and air conditioning, and then returned to the track at 5:00 p.m. for racing well past nightfall. Wymbs confessed MIT’s secret for success: “I think that one of the reasons MIT did so well as a team was that we have more experience than other teams at operating on less than eight hours of sleep.”

Garrett, by far the most experienced track cyclist of the troupe, noted that camaraderie was at the heart of the MIT victory. “It was great to have seven riders who

gave each race 100% and then spent the rest of the time supporting their teammates — truly an MIT team effort.”

USA Cycling will remember MIT’s gold-winning performance on the track as well as Ortega’s breathtaking rendition of the National Anthem on the final day of competition. Ortega is a newcomer to track cycling but already understands many of its nuances: “It takes more than having the strongest riders to win. It takes patience, control, and awareness to take the gold.”

Women’s volleyball team beats Babson on Tuesday

Leonard, Spielbauer lead team to victory, bring overall record to 24-3, 6-1 NEWMAC

By Paul Dill
TEAM COACH

MIT received 25 combined kills from senior Trinity P. Leonard and first-year Ada V. Taylor and 43 assists from senior Alyssa L. Rothman en route to a 3-1 victory over host Babson College in a NEWMAC women’s volleyball match at Babson College on Tuesday night.

With the win, the Engineers (24-3 overall, 6-1 NEWMAC) remained in the hunt for the regular season conference title, tied for second place with Springfield with a key match remaining against first-place Wellesley. Meanwhile, fifth-place Babson (18-6 overall, 3-4 NEWMAC) will likely need to win each of its final three league matches to have a

chance at securing its first home seed in the conference tournament since 1993.

Leonard led MIT with 13 kills in the victory, while Taylor hit .450 with 12 kills and only 3 errors. Senior libero Katie K. Spielbauer registered 29 digs for the Engineers, Lindsey M. Wang ’16 chipped in with 11 digs, and Tatiana Berger ’14 added nine kills. MIT hit .236 as a unit, marking just the fourth time this season that Babson allowed an opponent to hit better than .200 in a match.

The teams traded the first two sets, with MIT taking the opener 25-16 and Babson answering with a 25-22 triumph in the second. The pivotal third set then saw the Engineers rally from a four-point deficit with an 8-1 run to go up 24-21, only to have Babson fight

off three consecutive set points to even the score at 24-24. A Babson attack error then put the Engineers back up by one, and Rachel A. Hunt ’14 followed with a kill down the right sideline off a Roth-

man set to clinch the frame, 26-24.

After exchanging 3-0 runs to start the fourth and final set, neither squad led by more than one until a 6-0 burst by MIT turned a 10-9 deficit into a 15-10 advan-

tage midway through. The visitors’ lead would balloon to as many as seven on three different occasions down the stretch before junior Kristine A. Bunker’s kill finished off the set and the match, 25-18.

UPCOMING HOME EVENTS

Friday, October 19

Football vs. Salve Regina University 7:00 p.m., Roberts Field

Saturday, October 20

Women’s Fencing vs. Alumni Meet 1:00 p.m., DuPont Athletic Center

Men’s Fencing vs. Alumni Meet 1:00 p.m., DuPont Athletic Center

Women’s Tennis vs. Smith College 1:00 p.m., DuPont Tennis Courts

Men’s Soccer vs. U.S. Coast Guard Academy 1:00 p.m., Roberts Field

Men’s Water Polo vs. Washington and Jefferson College 2:15 p.m., Zesiger Center Pool

Women’s Soccer vs. U.S. Coast Guard Academy 4:00 p.m., Roberts Field

Sunday, October 21

Men’s Heavyweight Crew vs. Head of the Charles 2:55 p.m., Charles River

Women’s Openweight Crew vs. Head of the Charles 3:08 p.m., Charles River

Men’s Lightweight Crew vs. Head of the Charles 4:38 p.m., Charles River

Women’s Lightweight Crew vs. Head of the Charles 4:45 p.m., Charles River

Men’s Water Polo vs. Division III Championships TBA, Zesiger Center Pool

Monday, October 22

Men’s Soccer vs. Elms College 7:00 p.m., Roberts Field

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By
Joseph M. Brown
Ph.D., Purdue University, 1952

- Starts with basic Newtonian particles
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- Derives Newton’s equations of motion
- Shows why Maxwell-Boltzmann gas parameters v_r and v_m arranged as $[(v_r - v_m) / v_m]^2 = (\sqrt{3\pi/8} - 1)^2 = 1 / 137.1$ is fundamental to quantum mechanics
- Shows how neutrinos develop 10^6 newton thrust
- Proves that Newtonian particles can form stable inhomogeneous states – the neutrinos
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- Shows what causes gravitation
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- Shows how stars are formed
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Other books by Dr. Brown

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ISBN 9780971294462, 2004, \$29.95

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Packers will defeat Rams, Panthers will fall to Cowboys, Pats to dominate Jets

so they should be getting back on track.

Prediction: 27-10 Packers

Washington Redskins @ New York Giants

Sunday, Oct. 21, 1 p.m.
Robert Griffin has improved the Washington running game, and it really showed last week with his 138-yard performance. Their defense will really need to step up this week, though, if they want to challenge the Giants. The Redskins have the worst pass defense in the league and Eli Manning should feast on their secondary. Washington cannot match up with all of the receiving weapons the Giants have. The Giants come into this game brimming with confidence after thoroughly dominating the 49ers. NFC East games are always close, however, and the Giants are known to have trouble with running quarterbacks. Giants win in



NFL Predictions, Page 18


this year from the women's squad. The men's team is coming off an incredible 29-2 season, which saw them advance all the way to the Final Four in Salem, Virginia where they were one game away from the National Championship. The Engineers were ranked as high as #3 in the country last year, and are #1 in the national preseason rankings. This year,

a Beaver sports fan in general, with numerous teams dominating their respective sports. This Friday night at 7 p.m., the MIT Football team takes on Salve Regina in their last home game of the season. Immediately following the game at 10 p.m. in Rockwell Cage, Beaver Madness promises high-flying slam dunks, a faculty showdown, and prizes for fans.



Madeline L. Wharton '14 combats her opponents in Tuesday's field hockey game against Wheaton College. MIT won 11-2.

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